ENGLAND GCSE MATHS OCR HIGHER · UNIT 12 · 25 QUESTIONS

Probability — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **Three silver coins are tossed. The probability of three heads is**

- **A** $\frac{1}{16}$
- **B** $\frac{1}{8}$
- **C** $\frac{3}{4}$
- **D** $\frac{1}{2}$

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2 An ice cream cone is chosen at random from 9 cones: 3 vanilla and 6 chocolate. The probability it is vanilla is

- **A** $\frac{4}{9}$
- **B** $\frac{3}{11}$
- **C** $\frac{1}{3}$
- **D** $\frac{2}{3}$

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3 The probability of rain on Saturday is 0.5. If it rains, the probability a passenger train is late is 0.8. If it does not rain, the probability the train is late is 0.1. The probability the train is late is

- **A** 0.55
- **B** 0.45
- **C** 0.05
- **D** 0.4

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4 **A box contains 24 eggs. 6 eggs are cracked. The probability of picking a cracked egg is**

- **A** $\frac{3}{14}$
- **B** $\frac{3}{4}$
- **C** $\frac{7}{24}$
- **D** $\frac{1}{4}$

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5 **A fruit bowl contains 4 lemons and 6 apples. The probability of picking a lemon is**

- **A** $\frac{3}{5}$
- **B** $\frac{1}{2}$
- **C** $\frac{1}{3}$
- **D** $\frac{2}{5}$

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6 A shelf has 9 hardcover books: 3 red and 6 blue. The probability of picking a red book is

- A $\frac{3}{11}$
- B $\frac{2}{3}$
- C $\frac{1}{3}$
- D $\frac{4}{9}$

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7 A fair coin is tossed. The probability of a head is

- A $\frac{1}{2}$
- B $\frac{1}{4}$
- C $\frac{1}{3}$
- D $\frac{2}{3}$

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8 In a class of 30, 18 are girls and 12 are boys. 8 girls and 4 boys wear glasses. The probability that a student chosen at random is a girl who wears glasses is

- **A** $\frac{4}{15}$
- **B** $\frac{4}{9}$
- **C** $\frac{2}{15}$
- **D** $\frac{2}{5}$

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9 The probability of rain is 0.4. The probability of no rain is

- **A** 0.5
- **B** 0.4
- **C** 0.7
- **D** 0.6

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10 **Two dice are rolled. The probability of a total of 9 is**

- **A** $\frac{1}{9}$
- **B** $\frac{1}{6}$
- **C** $\frac{1}{12}$
- **D** $\frac{5}{36}$

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11 **A bag has 3 red and 3 blue marbles. A red marble is taken out. The probability the next marble is red is**

- **A** $\frac{1}{2}$
- **B** $\frac{2}{5}$
- **C** $\frac{1}{3}$
- **D** $\frac{3}{5}$

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12 **A coin is tossed 100 times. It lands on heads 48 times. The relative frequency of heads is**

- **A** 0.43
- **B** 0.53
- **C** 0.52
- **D** 0.48

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13 **A bag has 5 red and 6 blue counters. Two are drawn without replacement. The probability both are red is**

- **A** $\frac{2}{11}$
- **B** $\frac{3}{11}$
- **C** $\frac{5}{11}$
- **D** $\frac{25}{121}$

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14 A bag contains 5 red glass marbles and 2 blue glass marbles. The probability of picking a red marble is

- **A** $\frac{2}{7}$
- **B** $\frac{6}{7}$
- **C** $\frac{5}{7}$
- **D** $\frac{5}{8}$

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15 A fair six-sided die is rolled once. The probability of getting a 4 is

- **A** $\frac{1}{4}$
- **B** $\frac{1}{6}$
- **C** $\frac{1}{2}$
- **D** $\frac{1}{3}$

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16 P(A) = 0.4, P(B) = 0.2, P(A and B) = 0.2. P(A or B) is

- A 0.5
- B 0.4
- C 0.6
- D 0.08

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17 In a class of 30, 15 are girls and 15 are boys. 12 girls and 6 boys wear glasses. The probability that a student chosen at random is a girl who wears glasses is

- A $\frac{1}{5}$
- B $\frac{3}{5}$
- C $\frac{2}{5}$
- D $\frac{4}{5}$

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18 The probability of rain is 0.7. The probability of no rain is

- **A** 0.7
- **B** 0.2
- **C** 0.3
- **D** 0.4

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19 Two dice are rolled. The probability of a total of 7 is

- **A** $\frac{5}{36}$
- **B** $\frac{7}{36}$
- **C** $\frac{1}{4}$
- **D** $\frac{1}{6}$

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20 **A bag has 3 red and 4 blue marbles. A red marble is taken out. The probability the next marble is red is**

- **A** $\frac{2}{3}$
- **B** $\frac{2}{7}$
- **C** $\frac{1}{3}$
- **D** $\frac{3}{7}$

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21 **A coin is tossed 100 times. It lands on heads 37 times. The relative frequency of heads is**

- **A** 0.32
- **B** 0.42
- **C** 0.37
- **D** 0.63

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22 **A bag has 6 red and 5 blue counters. Two are drawn without replacement. The probability both are red is**

- **A** $\frac{36}{121}$
- **B** $\frac{6}{11}$
- **C** $\frac{2}{11}$
- **D** $\frac{3}{11}$

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23 **P(A) = 0.5, P(B) = 0.2, P(A and B) = 0.2. P(A or B) is**

- **A** 0.5
- **B** 0.6
- **C** 0.7
- **D** 0.1

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24 **Two dice are rolled. The probability of a total of 8 is**

A $\frac{7}{36}$

B $\frac{1}{6}$

C $\frac{1}{9}$

D $\frac{5}{36}$

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25 **A coin is tossed 200 times. It lands on heads 91 times. The relative frequency of heads is**

A 0.405

B 0.505

C 0.455

D 0.545

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ANSWER KEY

1.	B	**10.**	A	**19.**	D
2.	C	**11.**	B	**20.**	C
3.	B	**12.**	D	**21.**	C
4.	D	**13.**	A	**22.**	D
5.	D	**14.**	C	**23.**	A
6.	C	**15.**	B	**24.**	D
7.	A	**16.**	B	**25.**	C
8.	A	**17.**	C		
9.	D	**18.**	C		

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